

**Implementation Assessment Report  
of the  
State of California Online Selection System (OSS)**

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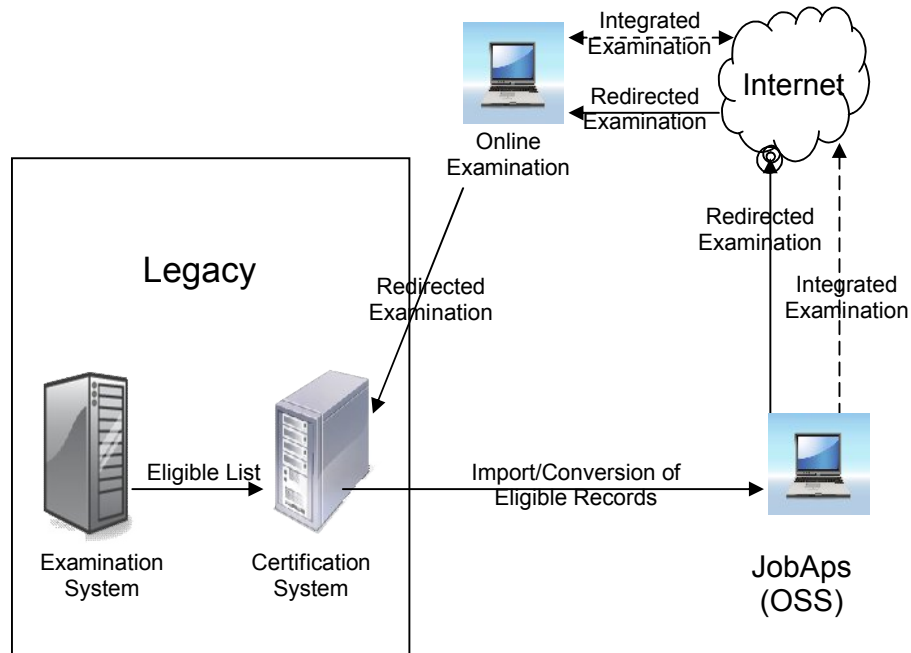
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## EXECUTIVE SUMMARY

The OSS project was planned to replace two legacy systems, introduce new technology to help streamline processes and improve the management of the examination and certification program for all state departments. Currently, the delivered solution has not delivered that promise. Instead, it has become one of the four systems used for Examination and Certifications.

### Current Systems



The implementation of the Online Selection System (OSS) using the JobAps software has many problems. The business and technical requirements were not properly defined thereby creating dispute between SPB and JobAps (the product vendor), system design documents have not been formally approved, many of the business functions have not been fully tested and validated, and converted data were not completely reconciled.

Additionally, the JobAps software has some design flaws that create performance problems when retrieving data or processing transactions. The results of these problems are:

- Forty five percent (45%) of the requirements have not been fully delivered
- There are many production errors
- The Online Selection System does not meet the required performance standard

Multiple solutions were evaluated as part of this assessment. Based on the OSS project status, the impacts of each of the problems identified on the business operations, and the need to ensure prompt and proper appointment of candidates into vacant positions, the following four options are proposed to address the OSS problems, minimize risks, and leverage investment on the OSS project.

- Option 1 – Maintain current systems and develop a new system in-house
- Option 2 – Maintain current systems and issue RFP for a new system
- Option 3 – Stabilize OSS, implement missing functions, improve performance, and retire all other systems
- Option 4 – Go back to legacy systems

The recommended solution is Option 3 plus a set of mandatory activities to address immediate problems. The Option 3 and the mandatory activities are estimated at \$1,081,780 and will take about 12 months to deliver. This estimate does not include the cost of SPB personnel that will be participating on the project.

## **1. BACKGROUND**

The State Personnel Board (SPB) is in the process of replacing the legacy information management system for the State of California's Personnel Examination and Certification (Exam and Cert) Systems administered by the SPB on behalf of all State departments. The SPB conducted a Request for Proposal to identify a commercial off-the-shelf (COTS) product that can be modified to meet all of the State's business and technical needs. The JobAps system was chosen. The JobAps product is being modified to meet all of the State's business and technical needs. SPB has implemented the Online Selection System (OSS) certification functionality within JobAps to all departments and is in the process of implementing the examination functionality.

During the course of implementation several issues have arisen with the system. As a result, SPB requested an independent review of the entire Exam and Cert system to determine if all requirements are being met.

### **a) SCOPE REVIEW**

The objectives of this review are to:

- Validate the requirements of the Examination & Certification program.
- Evaluate the OSS' (JobAps customized solution) ability to support the SPB's Examination and Certification program.
- Assess the design of the OSS to see if it can address the requirements of the Examination & Certification program.
- Analyze findings, provide solution options for problems identified, and make recommendation(s) for action to be taken.
- Provide an estimate on resources and schedule for completing the recommended solution(s).
- Deliver Final Assessment Report to SPB management.

### **b) METHODOLOGY**

The method used for the review was guided by a systematic set of evaluations that included the following:

- Gathering of key OSS project deliverables for review. (See Appendix B for List of Documents Reviewed)
- Interviewing key personnel to validate requirements and obtain feedback on users' experience on the system. (See Appendix A for list of Key Personnel)
- Reviewing OSS features, capacity, and customizations to make sure all requirements are addressed
- Reviewing test results, where applicable, to verify that the solutions provided are working properly to prevent operational issues

- Evaluating OSS for performance, scalability, and maintainability. Specifically:
  - Standard Features
  - Usability
  - Configurability
  - Reporting
  - Architecture
  - Data Security
  - Integration
  - Product Lifecycle
  - Product Support
- Analyzing our findings, identifying keys issues, and providing recommendations for issues identified.
- Providing updates to SPB management including potential issues as well as recommendation(s) for resolution where applicable.

**c) *THIS REPORT:***

This report is the outcome of the independent review as of April 21, 2010. It is intended for SPB management to identify:

- The RFP Requirements that were not met.
- Changes to the RFP Requirements that SPB needs to efficiently support the Exam and Cert program.
- Solutions for outstanding issues identified during the implementation of this project.
- Estimate of resources and timeline required to deliver the solutions for the outstanding requirements.

## 2. RFP REQUIREMENTS

Initially, there were 131 business requirements and 42 technical requirements (a total of 173 requirements) in the initial RFP for this project. One of the requirements (T-25: “*The proposed solution must have functionality to render data as PDF, HTML, and XML*”) was deleted as part of the Addenda to the RFP. The total number of requirements reviewed was 172.

### a) **REQUIREMENTS DEFINITION**

The review of the RFP requirements revealed many problems that have seriously affected the implementation process and quality of the solutions provided. The problems include:

- **Incomplete definition of business and technical requirements.** There are 8 requirements (B-10, B-38, B-55, T-2, T-7, T-17, T-22, and T-28.) that requested for tools or toolset to perform certain business or technical tasks with little detail on how, when, where, and the role to perform the task(s).
- **Too much emphasis on features without consideration for process.** For example, about 109 of the 173 requirements contained the phrase “*proposed solution must provide functionality*” and emphasized features of the solution but lacked details on processes.
- **Replication of requirements in different sections of the RFP.** Many of the requirements should have been consolidated for completeness instead of being repeated in pieces as separate requirements in the RFP. A few of the replicated requirements are listed below:
  - B-9 and T-5;
  - B-89, B-106, B-107, B-108, and B-109.

Some of the items listed above have been highlighted in different articles<sup>1</sup> as common problems on new system implementation.

**Impact(s):** The impact of incomplete or loosely defined business requirements include constantly changing scope, inadequate testing, delayed project milestones, increased system failures, and delayed benefits realization.

### b) **REQUIREMENTS STATUS**

The Exam and Cert requirements were carefully reviewed and the solutions provided were validated with SPB-User, SPB-IT, and JobAps (the product and implementation vendor). The analysis of the requirements against the delivered solution shows that many of the requirements are in different stages - ranging from Not-Delivered<sup>2</sup>, Deferred<sup>3</sup>, Incomplete<sup>4</sup>, Partial<sup>5</sup>, Error-Log<sup>6</sup>, Validation<sup>7</sup>, to Complete<sup>8</sup>. The following are the number of requirements in each of these stages as of Friday, May 07, 2010.

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<sup>1</sup> Jed Simms’ articles in June 2007 CIO Magazine and Karl Wiegers 10 Requirements Traps to Avoid, Published in Software Testing & Quality Engineering, January/February 2000

<sup>2</sup> No solution was provided.

<sup>3</sup> Marked as deferred and no solution has been provided. Also, no documentation on why it was deferred.

<sup>4</sup> A key piece of the requirement is not delivered.



Functional & Technical Requirements Status		
Status	Count	% of Total
Complete	91	53%
Defer	2	1%
Error Log	20	12%
Not Workable	1	1%
Incomplete	14	8%
Modification	3	2%
Not Delivered	3	2%
Partial	22	13%
Validation	16	9%
<b>Grand Total</b>	<b>172</b>	<b>100%</b>

Note:

- i) See Appendix C for Requirements Status Details
- ii) “Not Workable” status represents requirement that can’t be delivered based on the data available
- iii) “Modification” status represents requirement that was met and now modified
- iv) 14 out of 16 Validation items were confirmed to have been tested after completion of this report. The statuses of the tested items are not included in the totals above.

**Impact(s):** Having a partial solution for the Exam and Cert program may result in any or a combination of the following:

- Manual or additional work for SPB users,
- More work for SPB-IT to fill in the gaps,
- More testing/regression tests to ensure new functions are not breaking other functions previously delivered,
- Potential for increased system failures,
- Delay in benefits realization.

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<sup>5</sup> The functional/technical pieces are delivered but some portion and not fully functional.

<sup>6</sup> The function was delivered, assumed to be working, but created problem in Production.

<sup>7</sup> The solution for this requirement is still being tested/validated.

<sup>8</sup> The requirement has been met.

### 3. DESIGN DOCUMENTS

There were many design documents created for the Examination and Certification system. Some of these documents were initially submitted to satisfy the contractual deliverables (Deliverables No 3) prior to system development. A new set of design documents (Modules 1, 2, 3, and 4) were subsequently created to show the final solution that was delivered. A review of these documents revealed the following:

- The final design documents (Modules 1, 2, 3, and 4) did not address all of the requirements of the RFP. About 27 business requirements and all of the technical requirements are missing from these documents.
- None of the design documents were signed by SPB to indicate approval of the design.
- Changes and enhancement to the system since go-live are not updated on these documents. Instead, they are added to the problem ticket or stored as a separate document.
- Delivered design documents and other project files are editable and can be modified by anyone with access to the directory.

**Impact(s):** There are two major impacts that can results from these problems:

- Lack of signature on the design documents creates (and will continue to create) disagreement on whether a change to the system should be billable since it is a change to the “approved” (original) design.
- It is very difficult to get a single/comprehensive view of the business functions on the system when you have to search different documents in separate areas including the Error Log Library.

## 4. TESTING, VALIDATION, AND APPROVALS

Based on review of the available test documents provided by SPB Project Manager (ECRP\_Test\_Case\_final-12022009), there are indications that several tests were conducted for the Exam and Cert system before go-live. The concerns with the testing conducted for this project are listed below:

- Traceability matrix reflected only 28 business requirements out of 132 in the RFP.
- No documented results to show that critical transactions and different scenarios from the T-Log from the State Controllers Office have been thoroughly tested and validated.
- Key components of the technical requirements are not addressed in the testing. For example, stress testing to determine if the delivered system can support the required number of internal and external users specified in the RFP.
- The testing performed did not adequately address transactions that are migrated from legacy system. These transactions are major source of errors that are identified in the Production system. Some of the errors include: duplicated scores, Number-In-Score usage to break a tie on certification list, and Vet-Points consideration and award to eligible candidates.
- JobAps does not agree with the final testing document provided by SPB. While the vendor thinks there is a more current and updated document to what was provided by SPB, it was unable to produce substantially different information from the document originally identified by SPB.
- There are insufficient resources for the testing and validation activities. In particular, there is only one test environment available for SPB-IT and SPB-User to test. This test environment does not have integration to the Online Examination system and has limited processing capacity compared to production. Therefore, any testing related to online exams or performance test are usually done in the production environment. In addition, there are many fixes to be tested that sometimes create conflicting test steps. This situation adds to the delay in testing.
- Because many of the SPB-Users are busy handling calls and systems issues reported by their customers, they do not have enough time to test and validate test results of new changes/fixes to the system.
- For a brief period, the SPB-IT used to approve business functions and migration to production due to high volume of changes to the system and delays in getting user approvals.

**Impact(s):** There is potential for system errors because of the inadequate testing and testing resources. As of 05/11/2010, there are 9 fixes waiting to be tested or validated before migration to production. Inadequate testing resources will delay stabilizations of the new system.

## 5. CONVERSION

The project conversion plan identifies about 24 tables to be converted for the OSS. Majority of these tables are the business rules to manage the examination and certification processes. The employees/applicants data identified for conversion are the Eligibility Records (candidates that pass the examinations) and the related records. The following are the problems identified with the overall conversion process.

- There is no clearly documented data mapping for 12 tables that were converted. Many of these tables merely refer to the stored procedure (the program) that is used for the conversion. The tables affected include:
  - ✓ TABLE8
  - ✓ DISMISSAL
  - ✓ TABLEL
  - ✓ AGENCY-FACILITY
  - ✓ TABLE1
  - ✓ TABLE3
  - ✓ TABLE4
  - ✓ PROFILE
  - ✓ JOBS
  - ✓ APTOTAL
  - ✓ VETERANS
  - ✓ T-LOG
- The plan did not clearly identify the acceptance criteria for converted records (See Section 4.18 of the Conversion Plan: *“All imported data needed by JobAps is available via the JobAps user interface and can be verified against the import files. Error logs will display conflicts in conversion or import.”*)
- The relationships between location and testing locations were not properly established during conversion. This relationship is used to drive many processes during certifications.
- Considering the importance of the eligibility records for certification, the reconciliation by total number of records is not adequate to prevent illegal hires. As of the time of this report, the documentation of the total number of record eligibility records converted at go-live was not available.
- There is no user sign-off on reconciliation of converted data.

### Impact(s):

- There is no immediate impact for not documenting data mapping. However, if there is a problem with converted data, users cannot easily identify where each of the data elements were pulled from. This will require a programmer to look in the codes to determine what was done.
- The standard practice for conversion of key data is to account for all the records from the source system accurately in the target system. The accuracy of candidates' ranks in the converted eligibility records has not been validated. If a candidate's rank in an examination is not properly converted, it may create an illegal hire situation.
- There are no sufficient records available to satisfy a conversion audit.

## 6. ERROR LOGS AND RESOLUTIONS

Similar to many new systems, some “errors” are expected during conversion and immediately after go-live. Some of the commonly reported “errors” on new systems are merely seeking information. They include “*I don’t know how to do .....*” and “*I cannot find .....*”. SPB needs to track this type of information so that it can develop a list of frequently asked questions from them. There are also serious errors that require fixes in order for the system to work properly. These are tasks that project team should plan for and be prepared to handle.

Based on the information received from the SPB staff, many of the errors reported after go-live until January were not properly logged and may not be reflected in the statistics below. As of April 21, 2010, the following is a summary of the errors on the OSS.

Open/Closed	Status	Total
<b>Closed</b>	By Design	9
	Closed	165
	Documentation	32
	Duplicate	8
	HF On Prod	55
	HF On Stage	2
	HF On Test	5
	HF Packaged	1
	HF Verified on Stage	1
	HF Verified on Test	1
	JA Internal	1
	JA Review	6
	Misc	20
	Undecided	71
	Waiting for SPB	4
<b>Closed Total</b>		<b>381</b>
<b>OPEN</b>	By Design	6
	Closed	7
	CM Review	8
	Documentation	16
	Duplicate	1
	HF On Prod	10
	HF On Stage	2
	HF On Test	7
	HF Packaged	1
	JA Development	1
	JA Internal	2
	JA Review	33
	Misc	2
	Waiting for SPB	6
<b>OPEN Total</b>		<b>102</b>
<b>Grand Total</b>		<b>483</b>

### Legend for Status:

By Design – Designed to work like that  
Closed – Fixed that is moved to Production  
CM Review – Change Request for SPB review and approval  
Documentation – Response to Request for Information that is submitted as bug  
Duplicate – Duplicated cases  
HF On Prod – Hot Fix is applied to Production  
HF On Stage – Hot Fix is applied to Stage  
HF On Test – Hot Fix is applied to Test  
HF Packaged – Hot Fix is packaged and send to SPB from JobAps  
HF Verified on Stage – Hot Fix is verified on Stage  
HF Verified on Test – Hot Fix is verified and approved in Test  
JA Internal – Created by JobAps (for system improvement)  
JA Review – The case is under review by JobAps  
Misc – Case is waiting to be assigned for Review by JobAps  
Undecided – Same as MISC status (waiting to be assigned for Review)  
Waiting for SPB – Waiting for SPB review and approval

Based on the statistics above, the errors reported since go-live appear to be considerably high. Additional observations from the error logs include:

- 15 items (By Design) were reported as “errors” but JobAps believes the system was designed to function as such.
- Based on the different status of the items that are closed, it appears we are not properly updating our error-logs to reflect the true status.

**Impact(s):** The impacts from these problems are:

- It will be difficult to use the information in the error tracking database to estimate the time it takes to process a reported error from open to close.
- It will be difficult to develop FAQs (Frequently Asked Questions) from the information available in the FogBugZ because they are not properly logged and categorized.

## 7. GO-LIVE AND FINAL SYSTEM ACCEPTANCE

Besides the business and technical requirements, the RFP calls for twelve major items to be performed and appropriate documentation to be delivered. These items are bundled into contractual deliverables – Deliverables 1 through 12. We observed that many of these deliverables were not completed. The following examples highlight this belief.

- Many of the project contractual deliverables were updated by SPB. That's why their validity is challenged by the vendor
- Design specifications provided are not updated and current as called for in Sections 3 and 5 of the Statement of Work (SOW)
- Training materials were developed by an SPB subcontractor.
- Testing performed is not adequate to satisfy Sections 8 and 9 of the SOW. In addition, the Stress and Load Testing were not fully performed to comply with the technical requirements (T-39) as required in Section 9.3 of the SOW.
- Most importantly, there is no sufficient documentation and signed approval to indicate that the stipulations for acceptance of the new systems have been met and SPB has signed off on them as required in Section 11 of the SOW.

**Impact(s):** There are several impacts that can result from these problems.

- Contractual disagreement between SPB and the application vendor.
- Potential disagreement on when OSS went live and the start of the warranty period.
- Potential for increased “error” report based on SPB’s perception of what the system should do.
- Potential for request for additional payment to fix “errors”
- Delay in “error” resolution if additional payments are not made to the vendor.
- Loss of faith in the system by departmental users and the public at large.
- Potential for illegal hires and possible lawsuits based on this assumption.

## 8. OSS AND JOBAPS SYSTEM REVIEW

The OSS solution delivered for SPB is somewhat different from other “Live” solutions used by JobAps clients in many ways including the following.

- The certification module was completely rewritten for the State of California.
- It uses different security features for different functions.
- It is hosted by SPB and not JobAps.
- It has the most complicated set of rules, largest number of applicants, and the most amount and frequency of certification requests when compared to all other clients of JobAps.
- Finally, according to JobAps, it is a new product (called “JobAps Enterprise”).

For all of these reasons, it was necessary to take a deeper look at the new product, its features, performance, and the product lifecycle.

### a) **STANDARD FEATURES**

According to JobAps, the new system has the following features.

- ✓ Online Employment Center™
- ✓ Class Specs
- ✓ Track & Hire™
- ✓ Schedule & Score™
- ✓ SmartScan Pro™ and RemoteScan Pro™
- ✓ FreeNames™
- ✓ Web Recruiter™
- ✓ HRIS Integration
- ✓ Online Modular Testing™
- ✓ Online Rater & Rating Form
- ✓ Competency Modeling Suite

### b) **USER-FRIENDLINESS**

Many of pages in the application have a good layout and mostly driven by tabs. Some of the pages developed for SPB have some minor variations from the standard product. The following pages and processes need improvements to be more user-friendly.

- The Search feature on the OEC page needs to be modified so that the users do not have to click search twice before the available jobs are provided.
- The system requires users to Save and Exit on the Recruitment Planner before they can proceed to the Examination Page. This process can be improved with a simple Save button.
- There is no ability to copy Examination Plan from the Recruitment Plan the first time.
- The font controller provided for the Text Editor on the Bulletin page uses Pixels instead of Font-Size. This requires a lot of time and several trials to be able to get the required font-size. This tool should be improved.
- The system requires users to switch back and forth between the Examination Plan and Examination Scores pages. This is a common area of confusion for most SPB users. The process can be simplified.



- There are varying security types used in different part of the system. There is no visible online documentation to guide users on this feature.
- Applicants need to logout and log back in after registration in order to be scheduled for examination.
- The steps involved in merging applicant's profile (OSS and Legacy) are too many and time consuming. This needs to be improved.
- The steps required to create reemployment list (Freenames in JobAps) are too many and take about 15 minutes per record per list. This process takes a lot more time per employee when an employee has to be added to multiple lists.

We observed some inconsistencies on page and data presentations. These problems are found on the following pages.

- Recruitment Title Chooser (the descriptions are not completely viewable)
- Recruitment Level Chooser (the descriptions are not completely viewable)
- Class Title Chooser (the descriptions are not completely viewable)
- Reject Codes (the descriptions are not completely viewable)
- Hiring Checklist (the descriptions are not completely viewable)
- Examination Types (the descriptions are not completely viewable)
- Publication drop down (the description are not completely viewable)
- Flag Description on APS Annotate page (the descriptions are not completely viewable)
- Language Code Chooser (need to show both code and description)
- Department Table Drop Down does not consistently display the same type of data. It shows Department Code and Description on most pages but does not show the Code on the Job/Recruitment page.

**Impact(s):** The impact of inconsistent Graphical User Interfaces (GUI) and data presentation include reduced usability, user confusion, increased calls to SPB for help, and need for more training.

**c) *CONFIGURABLE BUSINESS RULES:***

Generally, the JobAps product is configurable. A few of the new features and rewritten functions have hard-coded business rules. Some of the hard-coded business rules or rules that SPB user cannot access include:

- The available definition of Test Components (QAP, Written, etc)
- Number of decimal position for the 4-Point Rescale
- Cert Rule ListSuperType (is not accessible by SPB)
- List Type (Open, Promo, Service-wide)
- Security options for Departmental Users
- Confirmation Pages
- Minimum Qualification (MQ) Notices
- 14 days for web posting date
- Determination of Item Analysis

**Impact(s):** Besides cost, the issues with hard-coded business rules include the need for a programmer when a change is required, the inability to pre-test and validate programming changes, and the time it takes to deploy changes.

**d) REPORTING:**

The proprietary reporting tool delivered has a major limitation. It can only print data horizontally and cannot print a record in more than one row. In addition, the data dictionary is not accessible to SPB-Users to use as guide for reporting.

**Impact(s):** The delivered reporting tool makes it impossible for users to create a report with more than 10 columns that is legible and consistent with other standard reports.

**e) ARCHITECTURE / DATABASE DESIGN:**

The review of the system architecture document (5.1.1LogicalArchitecture5.1.2PhysicalArchitecture.doc) shows that the document is for the JobAps Application version 4.0 and not JobAps Enterprise Product. JobAps has been notified of this error and needs to update all relevant documents.

The review and analysis of OSS database structure revealed some design flaws. The problems include the following:

- There are many tables with too many columns. The top 15 of these tables are listed below:

Table Name	# of Columns
TestRawscore	506
Jobs	386
Aptotal	275
ExamUploadTmp	258
SPBAptotalImportExceptions	197
SPBAptotal	194
SPBApTotal803	194
wrkAptotal	168
ApReview	165
wrkTable5_TestTimeSchedule	111
SPBJob	96
wrkJobs	96
ReqForms	94
RefHistory	85
Ref	83

These tables need to be normalized.

- There is Parent-Child relationship between many of the key tables but the keys to the Parent and Child tables are sometimes not aligned. These tables need to be restructured. Key examples include:
  - Profile and ApTotal tables
  - ApTotal and ApReview tables
- Required indexes are missing on some tables that need to be indexed.

**Impact(s):** The design flaws in the OSS architecture create data redundancy and contribute to performance problems.

**f) PERFORMANCE:**

One of the major complaints from SPB and Departmental users is that it takes too long (sometimes 30 seconds or more) to retrieve candidates' data on the Application page. Our review of the system at SPB and visit to CDCR location confirmed this complaint. JobAps is aware of the need for table restructuring and new indexes. The CEO of the company has stated that her team is working on these problems.

Additionally, we analyzed two queries that are commonly used to select records from the Application Page where performance is most noticeable. There are a few concerns with these queries. The concerns on these queries include:

- Use of OUTER Join to select records from some tables
- Full table scan when searching by name
- Pagination and sorting

These items are prime suspects for negative system performance. They need to be addressed.

**Impact(s):** The response time for transactions on the OSS will continue to be slow, and even slower, as more departments migrate their examination processes to the new system.

**g) DATA SECURITY:**

JobAps Enterprise appears to have a good amount of security features. The Security Administration page provides options to grant user access to different components in the system. Some of the components contain pages and bits of information that SPB would like to share with Departments users but not the entire component. This issue needs to be addressed either by adding custom pages for the departmental users or modifying the security.

Additionally, there is different security approaches applied to different functions within OSS. These approaches need to be properly documented and explicitly explained in the training class and materials.

**Impact(s):** The major impact of limitation in data access for department user is an increase in calls to SPB for help. Conversely, a loosely defined data security can create unauthorized access to critical system components or confidential data.

**h) INTEGRATION:**

The OSS has been successfully integrated with the Online Examination subsystem using ServerXMLHTTP. The tools used, and how the integration was done were not evaluated during this review. However, and according to JobAps, the system also supports SQL Server Integration Services (SSIS) and Web Services.

**Impact(s):** None.

**i) CUSTOMIZATIONS / ADD-ONS:**

There is a foggy definition of what the OSS is. This is because a major part of the system (the Certification piece) was completely rebuilt for SPB and delivered as a new product. Is it still a Commercial –Off-the-Shelf (COTS)? Is it now a Government –Off-the-Shelf (GOTS) product? This is yet to be defined by JobAps. Whatever the definition is, a complete document of the base product and all customization made to the base product should be delivered to SPB and the software escrow company.

**Impact(s):** The full impact of rewriting the Certification module cannot be measured at this time. However, based on the limited testing performed on this implementation, we expect more errors to be reported as SPB and departmental users continue to utilize the system.

**j) PRODUCT LIFE-CYCLE:**

Software vendors are expected to adhere to a structured approach when introducing new technology and business solutions. This approach must include product planning, structured design and development, thorough testing, and comprehensive documentation to create quality systems that will deliver target functions within schedule.

We attempted to obtain available information on the product life cycle from the CEO of JobAps since *JobAps Enterprise* is a new product line for this vendor. The following are highlights from that conversation.

All JobAps customers will receive:

- Quarterly maintenance releases with release notes provided 2 weeks in advance.
- Generally available enhancements which are provided based on customer demand and consideration of overall benefits.
- Emergency Hot Fixes as needed to address new browser releases, security updates, bugs, etc.
- Major Code upgrades to be compatible with newest Database and Operating System Software (approximately every 2 years).
- Customer Support Services Monday through Friday 7:00 AM to 6:00 PM excluding holidays.
- Professional Services available at published rates for requested enhancements.
- Invitations to JobAps User Group Meetings.
- Options to buy additional and fully integrated modules as they become available.

**Impact(s):** The information provided by JobAps appears to focus on stabilization of the new product. There may be few functional enhancements to the new product since there is only one client (SPB) using the product at this time.

**k)     *PRODUCT WARRANTY:***

All documentation we have reviewed shows the Go-Live date for OSS as September 28, 2009. The records we reviewed also indicate that not all of the requirements were delivered as of this date. Additionally, the records identified the effective date of the OSS warranty as August 3, 2009. Since product warranty usually commences after the complete product has been delivered, we believe that the August 3, 2009 is too early for the warranty effective date.

**Impact(s):** The impact of early effective date of warranty is that many of the functions may not be fully tested before the warranty expires.

## 9. SOLUTIONS

After careful analysis of the OSS project status and the impacts of the problems identified on SPB's business operations, we have identified and evaluated four top options and a set of mandatory activities to address the problems. The mandatory activities and the solution options are listed below.

### ***MANDATORY ACTIVITIES (MA)***

The following set of tasks needs to be performed regardless of the decision SPB chooses to take.

Requirements Clarifications: Clarify all incomplete requirements, provide sufficient details on the business needs, consolidate with other related requirements (where necessary), and include the associated processes and information flow to clearly show how SPB wants to perform the business functions.

Conversion Reconciliation: While we still have the staff that worked on the conversion around, we recommend creating a task to update the data mapping section of the conversion plan. Since the records in the source and target systems are still available, we also recommend creating report(s) to show and reconcile eligibility records by rank for each examination.

Testing: Complete all pending test items including stress test to identify what part of the system needs to be fixed before it impacts departmental users and the applicant population.

Fix Error: Prioritize and work with JobApps to fix all known and reported errors to minimize impact to SPB, departmental users and the applicants.

Testing Resources: Provide additional resources to thoroughly test and validate fixes provided to reported errors. Testing resources must include additional personnel, test environment, and issue tracking software to properly classify, capture, and report details on errors found. This will help improve quality and increase delivery time.

Design Documents: Review all design documents for completeness, and approve (or deny) to ensure a baseline for future changes to the system. These documents should also be put under a version control so that changes made to the documents can be tracked. This is critical to the success of all subsequent work to be performed on this system.

Change Management Process: Based on the lessons learned on this project, there is urgent need for a rigid change management process to help reconcile past project activities and enforce established project guidelines.

These mandatory activities are required immediately.

**a) OPTION 1 – MAINTAIN CURRENT SYSTEMS AND DEVELOP A NEW SYSTEM IN-HOUSE**

This option is to take all the user requirements created for the current project and update them so that they can be used to build a new examination and certification system in-house using SPB staffs.

Assumptions:

- The Mandatory Activities above are required in order to keep the examination and certification program functioning.
- This option assumes that all exiting systems will continue to be operational while a new system is being developed. The current systems are OSS, Legacy Examination system, Legacy Certification system, and Online Examination system.

Advantages:

1. This solution will be designed specifically for California. For that reason, it would address all the business and technical requirements better than all other options.
2. SPB will own all the intellectual property on the solution and have the in-house knowledge to maintain them.
3. On-going maintenance cost for product vendor will be avoided.

Disadvantages:

1. The initial cost of development of the solution will be higher than all other options because it will be built from scratch.
2. There will be competing need for resources to maintain the current systems that will also be required in the development of the new system.
3. The project will take the longest time to build and deliver.
4. The resources required to deliver this project are not available in-house and need to be acquired.

**b) OPTION 2 – MAINTAIN CURRENT SYSTEMS AND ISSUE RFP FOR A NEW SYSTEM**

This option will also take all the user requirements created for the current project, revise them for completeness, and use them to solicit for a Request for Proposal to replace the current examination and certification systems.

Assumptions:

- The Mandatory Activities above are required in order to keep the examination and certification program functioning.
- This option assumes that all exiting systems will continue to be operational while a new system is being developed. The current systems are OSS, Legacy Examination system, Legacy Certification system, and Online Examination system.

Advantages:

1. Open solicitation for COTS or GOTS will hopefully identify a mature and proven product that will address majority of the requirements and offer minimal customization for the remainder.

2. It will provide opportunity for quicker implementation
3. Quicker implementation will result in quicker realization of project benefits

Disadvantages:

1. This option will cost more money than Option 3.
2. There will be competing need for resources to maintain the current systems and also participate in the implementation of the new system.
3. The RFP process takes time to select the right product and the vendor to implement the selected solution.
4. The resources required to deliver this project are not available in-house and need to be acquired.

**c) *OPTION 3 – STABILIZE OSS, IMPLEMENT MISSING FUNCTIONS, IMPROVE PERFORMANCE, AND RETIRE OTHER SYSTEMS***

This option is to perform all of the following tasks to make the OSS stable, reliable, and complete with required functions in order to replace the legacy systems as originally envisioned.

- Validate and reconcile all delivered requirements and sign-off on all completed items.
- Negotiate all “Incomplete”, “Deferred”, and “Partially Delivered” requirements with JobAps.
- Develop complete specifications for Minimum Qualifications (MQs) requirements.
- Review the updated requirements and specifications from the Mandatory Activities section with JobAps and renegotiate the performance of the work including new and modified requirements, architecture upgrade, and system performance improvements.
- Implement a better reporting tool.
- Update training documents.
- Validate completion of all tasks and retire legacy systems.
- Renegotiate product warranty.

Assumptions:

- The Mandatory Activities above are required in order to keep the examination and certification program functioning.
- This option assumes that all existing systems will continue to be operational until the stabilization effort is complete. The current systems are OSS, Legacy Examination system, Legacy Certification system, and Online Examination system.

Advantages:

1. It supports continued operation while adding remaining functions to the OSS.
2. It leverages existing investment.
3. It offers opportunity for batched and incremental deployment of new functions.
4. It offers opportunity for quickest delivery of the complete solution.
5. Many of the resources required to perform this work are available with JobAps and already familiar with the issues.
6. Quickest implementation will result in quickest realization of project benefits



7. The additional cost will be lowest compared to all other alternatives.
8. Working with known vendor and staff minimizes risks.

Disadvantages:

1. It requires working with residual classic ASP codes until vendor rewrites these codes.
2. JobAps Enterprise is a new product. New products naturally are prone to errors.
3. The database design of the product needs to be restructured to enhance performance.
4. The additional resources required to deliver this project outside of JobAps are not available in-house and need to be acquired.

**d) *OPTION 4 – GO BACK TO LEGACY***

This option seeks to convert all examination and certification data on the OSS back to legacy and continue the business operation on the legacy systems.

Assumptions:

- The Mandatory Activities above are required in order to keep the examination and certification program functioning.
- This option assumes that all exiting systems will continue to be operational until the conversion back to legacy is complete. The current systems are OSS, Legacy Examination system, Legacy Certification system, and Online Examination system.

Advantages:

1. It is the 2<sup>nd</sup> lowest cost and quick to implement.
2. The legacy systems are reliable and offer good system performance.
3. Departmental users are familiar with them.

Disadvantages:

1. Loss of new functions that is now available in OSS. These functions include dynamic processing of applications and more configurable business rules than the legacy systems.
2. Going back to legacy will create credibility problem for SPB.
3. There will be some loss of faith in the system.
4. System support will be at risk because many of the people who know the mainframe systems are not readily available. Most of them have retired.

**COST SUMMARY FOR SOLUTION OPTIONS**

<b>Solution Options</b>	<b>Proposed Resources</b>	<b>Estimated Timeline</b>	<b>Estimated Cost</b>	<b>Cost of MA Plus Option</b>
<b>Mandatory Activities</b>	2 Business Analysts, 1 Programmer, 1 Quality Specialist	5 Months	\$ 178,240	
<b>Option 1</b>	1 Project Manager, 3 Business Analysts, 4 Programmers, 1 Database Administrator, 2 Quality Specialists, 1 Administration Staff	36 Months	\$3,925,120	\$4,103,360
<b>Option 2</b>	1 Project Manager, 2 Business Analysts, Estimated Implementation. Cost <sup>9</sup>	30 Months	\$5,066,666	\$5,244,906
<b>Option 3</b>	1 Project Manager, 2 Business Analysts, 1 Quality Specialist, Estimated JobAps Cost <sup>10</sup>	12 Months	\$ 903,540	\$1,081,780
<b>Option 4</b>	1 Project Manager, 2 Business Analysts, 2 Programmers, 2 Quality Specialists	12 Months	\$ 924,320	\$1,102,560

**Notes and Assumptions:**

- 1) MA means Mandatory Activities solution proposed
- 2) These estimates do not include the cost of SPB personnel that will participate on the project
- 3) The estimates are for the delivery of the options. They do not include the on-going operating cost as well as infrastructure and hosting services by DTS/OTTECH.
- 4) Each of the options assumes leveraging the existing infrastructure of the OSS and/or legacy systems.

<sup>9</sup> This item includes new product license and vendor implementation cost

<sup>10</sup> This item is the cost of work to be performed by JobAps for new (or modified) work and work that is deemed accepted and needs to be modified or reworked.

## **10. CONCLUSION**

This assessment provides valuable information about the challenges facing the Examination and Certification Replacement Project (ECRP) that delivered the Online Selection System (OSS). The problems found, potential impacts, and possible solutions have been evaluated and discussed above. The biggest problem and source of many issues that we found is the incomplete requirements document. This problem allows many of the requirements to be subject to interpretation and disagreement. This disagreement created many issues around scope. Therefore, many of the requirements are not completed.

The next significant issue is the lack of approval of each work component that was performed. Because there was no approval on any of the deliverables, it is creating problem when a change is required. Of more concern is the lack of approval before the system went live. The vendor believes that the system has been accepted because their invoices have been paid. The vendor also wants additional payment for changes to the delivered system. But SPB thinks otherwise because they have not signed off on the solution. This issue is serious and needs to be addressed.

Other key problems we found during the review include inadequate testing, system performance issues, incomplete design documents, inadequate documentation and reconciliation for conversion, large number of system errors, need for improved layout of pages and process flows, some hard-coded business rules, and the need to restructure and normalize some of the system tables.

Considering the need to continue to support the examination and certification processes, it is apparent that SPB needs a solution that will address current problems, be delivered quickly, minimize risks, and leverage the investment on the OSS project. Solution Option 1, Option 2, or Option 4 would not support this scenario due to time and budget constraints

### ***RECOMMENDATION***

We recommend the Mandatory Activities and Option 3 solution listed above. These combined solutions will address the requirements, contractual, quality, system performance, and support problems in the quickest time, least cost, and minimal risk.

Finally, whatever solution SPB chooses to implement it should have an oversight to avoid reoccurrence of the current problems.

**APPENDIX A - LIST OF KEY PERSONNEL INTERVIEWED**

<b>NAME</b>	<b>TITLE</b>	<b>DEPARTMENT</b>	<b>INTERVIEW DATE(S)</b>
Terry Silva	Chief – Merit Operations Division	State Personnel Board	03/23/10 – 05/06/10
Becky Tietz	Staff Services Manager II	State Personnel Board	03/23/10 – 05/06/10
Gina Forman	Staff Services Manager I	State Personnel Board	03/23/10 – 05/06/10
Loida Flores	Staff Services Manager I	State Personnel Board	03/23/10 – 05/06/10
Victor Mendoza	Chief Information Officer	State Personnel Board	03/23/10 – 05/06/10
Steve Brown	IT Manager	State Personnel Board	03/23/10 – 05/06/10
Gerrie Lobyoc-Velasco-	Senior Information Systems Analyst	State Personnel Board	03/23/10 – 05/06/10
John Harding	Staff Information Systems Analyst	State Personnel Board	03/23/10 – 05/06/10
Denise Ishimoto	Staff Programmer Analyst	State Personnel Board	03/23/10 – 05/06/10
Stephanie Gladden	Student	State Personnel Board	03/23/10 – 05/06/10
Kamal Atwal	Staff Services Analyst	State Personnel Board	03/23/10 – 05/06/10
Vicki Kepner	Associate Personnel Analyst	State Personnel Board	03/23/10 – 05/06/10
Maria Mendoza Jett	Associate Personnel Analyst	State Personnel Board	03/23/10 – 05/06/10
Michael Brunnette	Associate Personnel Analyst	State Personnel Board	03/23/10 – 05/06/10
Joanne Cordy	HR Chief – Workforce Planning & Selection	Dept of Corrections & Rehabilitation	04/23/10, 04/28/10
Cecilia Perrin	HR Manager	Dept of Corrections & Rehabilitation	04/23/10, 04/28/10
Marian Dilley	Manager – Workforce Planning & Selection	Dept of Corrections & Rehabilitation	04/23/10, 04/28/10
Valentine Osborn	Personnel Technician	Dept of Corrections & Rehabilitation	04/28/10
Khoa Nguyen	Personnel Technician	Dept of Corrections & Rehabilitation	04/28/10
Dina McKeever	Personnel Technician	Dept of Corrections & Rehabilitation	04/28/10
Jeanette Lopez	Personnel Technician	Dept of Corrections & Rehabilitation	04/28/10
Doreen Grisgby-Augmon	Personnel Analyst	Dept of Corrections & Rehabilitation	04/28/10

NAME	TITLE	DEPARTMENT	INTERVIEW DATE(S)
Jenna Berg	CEO	JobAps Inc	04/01/10 – 05/10/10
Troy Wintersteen	VP – Sales	JobAps Inc	04/22/10
Janet Sullivan	Senior Software Developer	JobAps Inc	04/07/10 – 05/10/10
Victor Chu	Senior Engineer	JobAps Inc	04/29/10
Subbu Lakshmi	Q/A Specialist	JobAps Inc	4/28/10 – 05/10/10
Jonathan Luckett	V.P. Engineering	JobAps Inc	04/29/10 – 05/10/10
Marty Miranda	Senior Engineer	JobAps Inc	05/10/10

**Note:** Interviews were conducted in Room 520 or SPB Building, by conference calls, and/or visit to Department of Corrections & Rehabilitation.

**APPENDIX B - LIST OF DOCUMENTS REVIEWED**

<b>DOCUMENT DESCRIPTION</b>	<b>DOCUMENT SOURCE</b>
Feasibility Study Report	Received via email from CIO
Special Project Report # 1	Received via email from CIO
RFP Documents and Addenda	G\ECRP\RFP
Requirements Document	G\ECRP\Deliverables\Management-DED-s\DED3
Fit-Gap Documents	G\ECRP\Deliverables\Management-DED-s\DED3
Design Documents	G\ECRP\Deliverables\Management-DED-s\DED3
Test Plans	G\ECRP\Deliverables\Management-DED-s\DED4
Test Reports	G\ECRP\Deliverables\Management-DED-s\DED8
Conversion Plan	G\ECRP\Deliverables\Management-DED-s\DED6
Contractual Deliverables (Deliverables 1 – Through 11)	G\ECRP\Deliverables\Management-DED-s\DED1 thru DED11
Product License Agreement	Copy provided CIO
Miscellaneous Design documents from JobAps	Emails from JobAps
List of Database Tables	E-mails from SPB
Key tables indexes	Emails from JobAps
Training Manual	Copy Provided by Training Team
T-Log Transaction Codes	Copy Provided by Merit Team
SPB Lawbook	<a href="http://www.spb.ca.gov/legal/policy">www.spb.ca.gov/legal/policy</a>
Data Retrieval Queries	E-mails from SPB

## APPENDIX C – REQUIREMENTS STATUS DETAILS

Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-1.	The proposed solution must provide for multiple (at least 6) levels of security and data access restrictions. (role-based)	Security	Modification	SPB: The intent of the user is to have a multiple roles per user-id. The system needs to allow users to have multiple roles without having to create multiple user accounts.
B-2	The proposed solution must provide the capability for authorized users to develop customized workflow/workplan (activities) for their own use to meet SPB milestones when conducting exams.	General	Incomplete	SPB: The "workflow" provided is a blank page to make notes. It does not provide fields to document what is to be done, By Who, When it is be done, Next Steps.
B-3.	Business rules must not be hard coded in the application, to permit the business rules to be updatable by authorized users at different departments with specific start and end effective dates for a specific rule.	General	Incomplete	There are several business rules that are hard-coded. The list has been provided to the CEO of JobAps. Because all the system functions have not been thoroughly evaluated, this list is currently a living document.
B-4.	The proposed solution must provide a highly functional, user-intuitive (for State staff in the Exam and Cert program areas) report generator that produces reports in hardcopy and electronic form, can report on all data contained in the system, and can perform interactive queries in the database without effecting on-line transaction performance. Current report samples can be found in the Bidder's Library	Reporting	Partial	JA/SPB: Reporting tool can only generate reports in one row per record.
B-5.	The proposed solution must provide pull-down lists for coded data fields.	General	Partial	SPB: The solution provided has inconsistent standard, description or both. Examples include Language Code/Description; Department Code/Title  SPB/JA: SPB has provided list of known pages where this exists.
B-6.	The proposed solution must use consistent terminology for both examination and certification processes.	General	Partial	SPB: The solution provided does not have consistent terminology for Examination and Certification processes. Examples include: 1) Referrals/Certs  SPB/JA: SPB has provided list of known pages where this exists.

## Online Selection System (OSS) Implementation Assessment Report

Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-7.	The proposed solution must perform functionality on a real time basis (e.g. create/display or print out a certification list for a specific classification when requested)	General	Complete	
B-8.	The proposed solution must provide access via the Web using a variety of internet browsers (e.g. Microsoft Internet Explorer 4.0 or upward or FireFox 1.4).	General	Partial	SPB: The solution provided only supports Internet Explorer 6 and 7. All other browsers are not supported.  SPB/JA: SPB has provided list of issues on this requirements to JobAps.
B-9.	The proposed solution must provide access to the application in compliance with ADA Level 1 (American's with Disabilities).	General	Partial	SPB: The solution provided is not compliant with ADA Level-1 for internal users. Also related to T-5.  SPB/JA: SPB has provided list of issues on this requirements to JobAps.  JA: JobAps is working to resolve the outstanding items on this requirement under Log# 12346. The vendor testing is in-progress.
B-10.	The proposed solution must provide tools for performing examination item analysis for purpose of generating statistical reports on exam results (e.g. determine if the discriminators for tests are effective.)	Reporting	Validation	
B-11.	The proposed solution must provide security of confidential and personal data and allow candidates to update their own information.	Security	Complete	



## Online Selection System (OSS) Implementation Assessment Report

Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-12.	Produce standard reports as needed, on demand, or at scheduled intervals. Refer to the Bidder's Library for samples of SPB's current standard reports required.	Reporting	Incomplete	<p>SPB: Some of the requested reports in Section 4.0 of the RFP are not provided at all.</p> <ol style="list-style-type: none"> <li>1) Audit the examination process - (No)</li> <li>2) Audit the outcome of each exam processing phase - (Yes)</li> <li>3) Audit the appointment processes overall - (No)</li> <li>4) Generate statistics for various inquiries and reports - (Yes)</li> <li>5) Comply with federal and state reporting requirements, including federal EEO - (Partial)</li> <li>6) Notify applicants of scheduled examination times and sites - (Yes)</li> <li>7) Facilitate administration of the examination - (No)</li> <li>8) Audit the outcome of a specific hiring process - (No)</li> <li>9) Generate general communication with applicants - (Yes)</li> <li>10) Assess the current status of a list to determine if additional examinations are needed - (No)</li> <li>11) Evaluate the outcome of appointment practices - (No)</li> </ol>
B-13.	Make examination screens customizable by authorized users so that departments can create screens specific to their types of examinations held and their workflow.	General	Complete	
B-14.	The proposed solution must provide functionality to place an eligible on temporary or permanent "withhold" status from eligible list until job requirements (or other conditions of employment) are met or based on Government Code 18935.	Eligibility	Complete	
B-15.	The proposed solution must provide functionality to track applications submitted, determine minimum qualifications, process examination via a web based interface	Application	Incomplete	<p>SPB: The system needs to support calculated minimum qualifications. For example, when there is more than one pattern to determine entrance in to an exam, the system needs to recognize the different options available.</p> <p>This is related to B-51 and B-66</p> <p>With respect to B-66, the ability to create online exams exists, but the required security to ensure that authorized persons can access the exams is missing.</p> <p>SPB: See additional notes on the FIT/GAP document on B-15.</p>
B-16.	The proposed solution must provide functionality for an examination analyst/manager to track examination planning/progress throughout the process.	Exam	Complete	

## Online Selection System (OSS) Implementation Assessment Report

Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-17.	The proposed solution must provide Exam progress capability so applicants can find out where they are in the exam process online.	Exam	Error Log	SPB: There are few errors reported. See Log# 12444
B-18.	The proposed solution must provide functionality for multiple (at least 10) types of examinations (e.g. open, promotional).	Exam	Complete	
B-19.	The proposed solution must provide functionality for a single exam to create more than one list type (e.g. open and promotional lists) (Selection Manual Section 4440, page 4440.7)	Exam	Complete	
B-20.	The proposed solution must provide functionality for one or more departments to participate in an exam and allow the resulting lists from this exam to be specific to one or more than one department, or common to all departments participating in the exam. (Gov. Code 18930.5)	Exam	Complete	
B-21.	The proposed solution must provide functionality to create and print eligibility lists based on a single classification or each class in a series examination. (CCR Title 2, Division 1, Section 207)	Eligibility	Complete	
B-22.	The proposed solution must provide functionality for examinations for a single classification or a series of classifications in a single examination instance. When an examination for a series is given, applicants may test for one or more, or all classifications offered.	Exam	Complete	
B-23.	The proposed solution must provide functionality for the setting of maximum possible scores and passing score thresholds for a specific examination at any time during the examination process. (Gov. Code 18937)	Exam	Complete	
B-24.	The proposed solution must provide functionality for authorized personnel to specify specific examination phases for which applicant examination scores must be saved, specify the length of time the scores must be saved, and make the scores available with proper authorization for verification at a later date. (Gov. Code 18938)	Exam	Complete	

## Online Selection System (OSS) Implementation Assessment Report

Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-25.	The proposed solution must provide functionality for examination phases that are increasingly exclusive (e.g., Phase 1 must be passed to qualify the individual to take Phase 2) or phases that are independent of each other (i.e., all phases are taken regardless of an individual's performance on any one). (Gov. Code 18936)	Exam	Complete	
B-26.	The proposed solution must provide functionality to change exam criteria (such as the number of phases, new scoring preferences or revise the current phase scoring structure, phase weighting, or phase type) by authorized users at any time after an exam has been established, including after an exam phase has been administered, after all phases have been administered, or after scores have been entered, including effective date and end effective date for each item, and maintain an audit trail of the historic transactions (who did what when) for the life of the list plus one year (5 years). (Gov. Code 18935, 18937, 18951, 18973)	Exam	Partial	SPB: The audit trail does not always identify what was changed.  JA: The vendor is working with SPB to get more information to be able to propose a solution.
B-27.	The proposed solution must provide functionality for the system to retrieve from an external system and allow for creation of and store the minimum qualifications for a specific classification for use when creating the Exam Bulletins.	Exam	Complete	
B-28.	The proposed solution must provide functionality for ensuring that departments wishing to offer service-wide examinations are approved by SPB prior to creating the "Exam Control Record".	Exam	Complete	
B-29.	The proposed solution must provide functionality for supporting user-designation of geographic regions, which may be based on existing jurisdictional boundaries (city, county), or may cross or combine existing jurisdictional boundaries for examination locations. (Gov. Code 18902)	Support	Complete	SPB: The location table does not support multiple parents. This problem has been corrected. The outstanding issue is the field labeling - PARENT field should be SUPPORTING and CHILD should be SUPPORTED location codes.
B-30.	The proposed solution must provide functionality for capturing and storing information related to a specific examination phase for use as the basis for scheduling the exam: (Gov. Code 18900) at a minimum, the following must be captured and stored: length of exam phase, type of exam phase, number of days exam will be given, lunch and other break information, number of panel members, and number of panels.	Exam	Incomplete	SPB: The definition of panel by way JobAps does not align with SPB operations. That is because a panel is in not the true members that are rating the candidates - but the combination of a location, date, and time. This is a problem because it prevents SPB from creating: 1) Mean for a panel 2) True schedule for a panel.

## Online Selection System (OSS) Implementation Assessment Report

Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-31.	The proposed solution must provide functionality for the testing department(s) to select any number of predefined additional proficiencies and qualifications for each exam instance, or to create new proficiencies and qualifications. These proficiencies and qualifications must also be available as selection criteria when a Certification List is generated. (Gov. Code 18931)	Exam	Partial	<p>SPB: The preferences/select flags have been provided. However, the departments cannot currently utilize the select flags associated to a class or create their own proficiencies without SPB involvement. Additionally, candidates cannot change their preferences without SPB intervention.</p> <p>JA: The update of Applicants Preferences is not part of this requirement. The ability of Departments to delete Questions that have been used will be removed.</p>
B-32.	The proposed solution must provide functionality for the testing department(s) to create an Exam Bulletin entering all data required to create the bulletin and store the information for later use, re-use a previously published bulletin, or use existing predefined information. After an Exam Bulletin has been created, allow the Bulletin to be posted directly to the SPB web-site and generate notices to applicants that the examination has been scheduled. (Gov. Code 18933)	Exam	Complete	
B-33.	The proposed solution must provide functionality for automatic printing and/or e-mail distribution of exams bulletins to departments, interested applicants, and outside organizations, to include the UC system, the CSU system, the Community Colleges, Community-Based Organizations, etc. when the bulletin is posted.	Exam	Modification	<p>SPB: The email feature exists but the space provided for the e-mail addresses is not adequate to capture all addresses per group.</p> <p>SPB: The revised requirement to be provided by SPB.</p>
B-34.	The proposed solution must provide for multiple (at least 10) time bases (such as full time, part time, or intermittent).	Exam	Complete	
B-35.	The proposed solution must provide for multiple (at least 10) tenure bases (e.g., permanent, limited term, CEA.)	Exam	Complete	
B-36.	The proposed solution must provide functionality for capturing test results for oral language proficiency test results for at least 100 languages (such as language codes) and record and store the results.	Exam	Validation	
B-37.	The proposed solution must provide functionality for an applicant to claim proficiency in a performance area (e.g., typing speed, language) and flag for confirmation or testing upon being placed on a certified list.	Application	Complete	

## Online Selection System (OSS) Implementation Assessment Report

Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-38.	The proposed solution must provide tools to create and store a library of standard language clauses that can be modified or deleted when generating standard form letters and notices and include the ability to perform spell-check. Allow users to select specific language for inclusion in routinely generated letters. (CCR Title 2, Division 1, Section 209)	Support	Incomplete	SPB: 1) Table Y solution proposed by JobAps is being validated. 2) The Chooser for Contract Clauses on the Contact Letter page infrequently shows up and cannot be edited. 3) Also, there is no spell check.
B-39.	The proposed solution must provide functionality for system to allow candidates to select and/or schedule themselves to exam sites.	Exam	Error Log	SPB: The rescheduling feature is not working: (The solution is PENDING). Also, there is performance issue with Office Technicians self-scheduling. There is an error log report for this problem - Log# 12415 (Waiting for Business Approval) and 11135 (Waiting for SPB to Approve).
B-40.	The proposed solution must provide functionality for capture of job preference information and job-related criteria such as tenure, shift hours, subject matter expertise, location, time-base, and departments the applicant does not want to work for (on service-wide exams) on the application.	Application	Partial	SPB: Original request was delivered. However, this function is bundled with other sensitive tools that make it dangerous to grant access to the Department. If the Departments are granted access, they will be able to see the Questions belonging to other departments.  On the Applicant side, there is option for applicants to select and de-select the Select-Flags (elements used to denote job preference) the first time only. See SPB Rule 261 supported by Gov Code 19057  JA/SPB: There is a new requirement to create, access, and authorize departments to view Select-Flags.
B-41.	The proposed solution must provide functionality for applicants to view available examinations by job category, classification, location, tenure, and time-base.	Exam	Complete	
B-42.	The proposed solution must provide functionality for capture of applicant personal information, including disability, gender, and ethnicity for reporting purposes without the actual administration of the examination through the system in generic terms for statistical annual reporting. (Gov. Code 18573, 19792)	Application	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-43.	The proposed solution must provide functionality for applicants to complete and submit an application on-line and the system to automatically fill those fields that are already known to the system such as applicant address.	Application	Error Log	SPB-User/JA: See Issues List #10940  JA: The data fields to be moved around needs to be handled via changes request.
B-44.	The proposed solution must provide adequate space to capture long items of personal info_(names/addresses) for all applicants, including foreign addresses (a minimum of 120 characters).	Application	Complete	
B-45.	The proposed solution must provide functionality for input of data in electronic format, including input from the Internet or submission of scanable forms for applicant information. (Gov. Code 18934, 18900)	Application	Partial	JA: SPB-IT has the import tools (import Routines) for different tables including profile, Applicant Record, Recruitment, Roster Records. JobAps to provide status report or some other documentation of delivery.  SPB-IT: The scanable applicant profile had issues with upload and scheduling of scanable forms when tested with about 400 forms. The expected production volume is 3,000 forms. This process has not been thoroughly tested.
B-46.	The proposed solution must provide functionality for the user to specify the number of contact letters or e-mails to be generated to fill a vacancy from the Certification List.	Certification	Error Log	SPB: Pending e-mail option delivery. Also need to validated performance (times out) and resolve error relating to inability to print contact letters - Log# 12352 (closed) and Log# 12867
B-47.	The proposed solution must provide functionality for performing validation and verification of applicant's: promotional eligibility for examination, career points, veteran's preferences, and report the outcome of that verification process. (Gov. Code 18951, 18954, 18973)	Application	Partial	SPB-User: No report to show that veteran's and/or Career points has been applied unless users have to manually go into each applicant's file to check.  In addition, the partial solution provided had error - giving Vet's credit to non-veterans  Note: This is related to B-70 and B-73.

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-48.	The proposed solution must provide functionality for retaining examination history for determining if an applicant is eligible to test at a specific time (such as applicants cannot retest within 24 months). (Selection Manual Policy 5720)	Application	Error Log	<p>SPB-IT: No "Too Soon" data was migrated from SPB's Legacy to JobAps.</p> <p>JA: The date of the exam on the prior scores data is used to determine if it is "Too Soon" when the candidate tries to apply for the exam in OSS.</p> <p>SPB-users to validate and give feedback.</p> <p>SPB-User: Test revealed that test score were brought over (showed up on App-Summary but not on the App-Profile page) and the Too Soon Application was not detected. See log# 9762 (Closed). Also See Log# 12866</p>
B-49.	The proposed solution must provide functionality for preventing applicants from taking an examination within the specific time frame. (e.g. can only take the exam every 24 months based on business rules)	Eligibility	Validation	
B-50.	The proposed solution must provide functionality for validating that an applicant is eligible to take an examination and, if ineligible (dismissed from State service), generate an electronic and/or printed notification to the Testing Department of the applicant's ineligibility. (CCR Title 2, Division 1, Section 211)	Eligibility	Validation	
B-51.	The proposed solution must provide immediate notification during the session to on-line applicants applying for an examination of ineligibility to take the examination when the applicant does not meet the minimum qualifications (such as must have a 4-year degree or non-permanent employees applying for promotional exam, etc.) and reason for rejection.	Application	Incomplete	<p>SPB: The notification message for an integrated exam is hardcoded. There is no option for the user to directly update this message. Also, because Requirement 15 is not completely functional (allowing user to setup calculated minimum qualifications) the notification needed in this requirement is not complete.</p> <p>JA: Feels it is addressed.</p> <p>JA: There is a change request to create a dynamic (different) messages based on different conditions.</p>

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-52.	The proposed solution must provide verification of prior scores in user-designated areas, including written tests, language fluency, and typing tests. If prior scores are permitted, automatically move the applicant to the next phase. As designated by authorized personnel, allow for waiving the applicant from retesting in specific areas. (Gov. Code 18938)	Application	Error Log	SPB: Requirement is complete. But the system needs to stop duplicating scores records when an application on file is created. Additional testing is pending. JA: SPB to send a copy of the error log identified. There is also problem with blank test-Ids for candidates coming from the legacy system. See log# 9762 (Closed).
B-53.	When an applicant self-certifies that he/she meets the minimum qualifications to take an examination, the proposed solution must provide functionality to indicate on the Certification List that minimum qualification evidence is required when the person is interviewed to validate that the applicant does meet the minimum qualifications.	Application	Incomplete	SPB: An automatic trigger of Accept-flags is required when an applicant provides a self certification. In addition, when a hiring checklist is turned on at the recruitment level, the system needs to provide an option to remove this flag at the employee level to avoid repetitive of verification during interviews. These functions are missing now.  Need additional Accept Flag fields on the Annotate screen to accommodate the proposed solution by JobAps.
B-54.	The proposed solution must provide functionality for storing examination scores and results (e.g., subject matter table, prior scores and written test waivers) for a specified period of time specified by authorized users with the testing department(s).	Exam	Validation	
B-55.	The proposed solution must provide tools to allow authorized users to easily locate and retrieve an individual application based on the SPB Record Retention Schedule. (CCR Title 2, Division 1, Section 174)	Support	Complete	
B-56.	The proposed solution must provide access security to ensure that personal information about applicants is not inappropriately disclosed, including ensuring that -- after initial data entry -- data is not displayed when the applicant record is accessed or modified, either during self-service or departmental processing. (e.g. for passwords and SSN, data must be entered twice, encrypted, and masked on the screen) (Civil Code 1798 and Gov. Code 19705)	Security	Complete	



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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-57.	<p>The proposed solution must provide functionality for automatically generating examination/certification correspondence (including duplex) such as examination notices, letters and address labels. Allow departmental users to modify standard generic letters without affecting the underlying standard template, or save changes to the template for use by a specific department and store as new templates in a library of standard form letters to be used at a later date. Examples of the types of Notices, Letters and Mailing Labels required are as follows: (CCR Title 2, Division 1, Section 209)</p> <ul style="list-style-type: none"> <li>· Notice to Appear</li> <li>· Notice of Rejection</li> <li>· Notice of Examination Results</li> <li>· Contact Letters</li> <li>· Failure to Qualify for Examination</li> <li>· Employment List Extension Notices</li> <li>· General Information Eligibility Notices</li> <li>· List Abolishment Notices</li> </ul>	Support	Error Log	<p>SPB: The modification to Standard Generic Letters is also required for Internet Exams</p> <p>The system is generating multiple notices in a series exam instead of one.            Notices created are wrong for series exams - see Log# 8825 (close) &amp; Log# 10971 (Waiting for SPB Approval).            Also there is hard-code.</p> <p>JA: JobAps System Engineer can help using base scheduling.</p>
B-58.	The proposed solution must provide functionality for multiple (at least 4) types of examination phases (written, QAP, performance based, supplemental, training & development, and/or education & experience) within a single examination and at least 25 segments (subject matter areas) within each phase.	Exam	Complete	
B-59.	The proposed solution must provide a graphical user interface for scheduling of examinations function such as an on-line calendar or a listing of exams by class with pertinent information displayed.	Exam	Complete	
B-60.	The proposed solution must provide functionality for entry and tracking of scheduling accommodation requests with the applicant's request to take an examination (e.g. accommodation requests allowing exceptions based on religious beliefs or disability). (Gov. Code 18940, Americans with Disabilities Act)	Application	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-61.	The proposed solution must provide functionality for individual candidates, more than one candidate, or all candidates scheduled for a specific examination phase to be rescheduled and automatically generate electronic and/or written notices to those that are rescheduled of the new date, time, and location. (Gov. Code 18900)	Exam	Error Log	SPB: Additionally, the system should allow any of the "No-Show" applicants for an exam to reschedule themselves and not treat them as Too Soon. (New)  SPB: Still have wrong notices generated for series exams. See Error Log#
B-62.	The proposed solution must provide functionality for capturing and retaining the following information related to examination sites for reuse in other exams: (Gov. Code 18900) <ul style="list-style-type: none"> <li>· Location of test sites, including site address and room numbers</li> <li>· Number of testing stations in each room</li> <li>· Special accommodations available by room</li> <li>· Times available</li> </ul>	Support	Complete	
B-63.	The proposed solution must provide functionality for creation of a tentative exam phase schedule, which may be accepted, revised, or rejected. (Gov. Code 18900)	Exam	Complete	
B-64.	The proposed solution must provide functionality for authorized users to dynamically determine scheduling of applicants for exams based on at least 15 factors, such as location of exam site, work shift preference, time base, tenure, type of exam, required physical accommodation, number of candidates to be tested at one time, facilities availability, and/or length of test phase. (Gov. Code 18900)	Exam	Partial	SPB: Scheduling by shift is not yet validated because the shift information is not available on the applicants. Otherwise this requirement is OK.  SPB: Cannot schedule different levels with different times. Without this requirement, we will continue to legacy system.
B-65.	The proposed solution must provide functionality for candidates to be scheduled and scored while exam is active or completed, and generate applicable results notice and allow successful candidates to be supplemented to the list if exam is already completed and list established.	Exam	Complete	
B-66.	The proposed solution must provide functionality for departments to create on-line examinations and store them for future use in variable formats (such as multiple choice).	Exam	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-67.	The proposed solution must provide functionality for departments to create on-line examinations that allow the questions to be randomized within each segment or the answers to be randomized within each question for each exam to prevent a single applicant from taking the exam the first time to find out what all the questions are under one name and then take the exam a second time with the same questions.	Exam	Defer	SPB: The system does not currently support this function. Also, there is no explanation from vendor and SPB on why this requirement was deferred with no specific delivery date.
B-68.	The proposed solution must provide immediate test results to on-line examination candidates during their session.	Exam	Complete	
B-69.	The proposed solution must provide functionality for standardized scoring.	Exam	Complete	
B-70.	The proposed solution must provide functionality for calculating exam scores after all information for all exam phases has been entered to determine candidate eligibility. (Gov. Code 18936)	Exam	Validation	
B-71.	The proposed solution must provide the functionality to score items like low fidelity where distracters receive different points (including negative values) and applicants record more than one response per item. (refer to the Bidder's Library)	Exam	Validation	
B-72.	The proposed solution must provide functionality for recording scoring data for any number of separate examination parts, with each phase weighted separately, and generate reports necessary to accomplish evaluations of outcomes of each phase, including Item Analyses and Raw Score Tabulations. (Gov. Code 18933, 18930)	Exam	Validation	
B-73.	The proposed solution must provide functionality for capturing and storing information to identify individuals approved as eligible for Veteran's Preference points without requiring that the individual be an exam applicant. Ensure Veteran's Preference Points are no longer applied to new exams after an individual has attained permanent civil service status. (Gov. Code 18976)	Support	Error Log	JA/SPB: 1) The VETS points are being applied to applicants that have attained permanent employment status. See Log# 12416
B-74.	The proposed solution must provide functionality to create certification lists, including "commitment" certification lists, to be created based on specific criteria for the vacancy being filled. Refer to the Bidder's Library On-Line Certification Manual, Phase 1, Chapter R-1.	Certification	Error Log	SPB: The system needs to support Certification List without limit on the number of records. If the limit is mandatory, there should be an option for user to override the set limit, when needed.  See Issue# 9; & FogBugz # 10121 (closed). Also see Log#s 10689, 12636, 12339f

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-75.	The proposed solution must provide functionality for skills to be weighted based on relative importance for a specific position (such as 70% network support, 30% application development) and create certification lists utilizing these test weights.	Certification	Defer	SPB: Deferred. This requirement is dependent on DPA approval of skill based certification.
B-76.	The proposed solution must provide functionality to sort individuals on the eligible list based on applicable current certification business rules.	Certification	Complete	
B-77.	The proposed solution must provide system access security to ensure that no department, division or entity is able to request, view, download or gain other access to any eligible listing to which it is not entitled based on business rules. (Gov. Code 18573)	Security	Complete	
B-78.	The proposed solution must provide for the business rules applicable to eligibility and certification for lists to be stored with beginning and ending effective dates, maintained by non-technical staff, and applied as required.	Support	Complete	
B-79.	The proposed solution must provide functionality to determine an individual's eligibility based on business rules for placement on the State Restriction of Appointment (SROA) and/or Re-employment lists and post the individual to the appropriate list(s). (Gov. Code 18903)	Support	Error Log	SPB: The proposed solution is manual and takes about 15 minutes per transaction and may involve many lists. Therefore, SPB has developed a subsystem to allow user to enter this information on the subsystem and then do an import into JobAps. The OSS currently has some bugs and needs to be fixed. See Log# 11853
B-80.	The proposed solution must provide functionality for creating ranks of eligible candidates based on test scores with scores grouped together based on user-defined criteria. (Gov. Code 19057.2)	Eligibility	Error Log	JA: The Error log needs to be addressed Log# 11799 (waiting for SPB Testing)
B-81.	The proposed solution must provide functionality for maintaining a list of the names of individuals that are on reemployment and/or, State Restriction of Appointments Program (SROA).	Support	Complete	
B-82.	The proposed solution must provide functionality for changes in the selection and ranking criteria governing eligible and certified list generation. (Gov. Code 19057-19057.4)	Support	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-83.	<p>The proposed solution must provide functionality for a list or lists to be generated based on the following examples of user-entered parameters (at least 50) (Gov. Code 19057, 19801):</p> <ul style="list-style-type: none"> <li>· Class code (may include using a class code from a department other than the user's department if positions are appropriate)</li> <li>· Agency code</li> <li>· Departmental code (may be other than user's department)</li> <li>· List type</li> <li>· Geographic region of work site</li> <li>· Other geographic indicators</li> <li>· Language fluency</li> <li>· Additional proficiencies/qualifications</li> <li>· Number of individuals to include</li> <li>· Number of ranks to include</li> <li>· Tenure, including number of months for limited term</li> <li>· Time base, including full-time, part-time (specify fractional time base), intermittent (specify number of hours per week to be worked)</li> <li>· Social Security numbers (may be multiple entries)</li> </ul>	Certification	Complete	
B-84.	<p>The proposed solution must provide functionality for the list eligibility of a person to be transferred between comparable eligible lists and allow final score conversion, require user authorization levels/access to be identified (by list types); and allow successful rescheduled candidates to be supplemented to the list if the exam is already completed and list established.</p>	Certification	Complete	
B-85.	<p>The proposed solution must provide functionality for storing complete examination history of applicants by classification in accordance with the SPB records retention schedule (refer to the Bidder's Library).</p>	Exam	Validation	
B-86.	<p>The proposed solution must provide functionality to automatically determine which certification rules apply based on class and/or examination type when creating a cert list and including a cert list for classifications that have a comparable LEAP eligible list.</p>	Certification	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-87.	The proposed solution must provide functionality for producing contact letters to eligible candidates and a contact letter listing on request or at the time the appropriate list is keyed.	Support	Partial	<p>SPB: The system was modified to provide 500 contact letters in a batch and worked fine. The revised modification to provide 3,000 contact letters is being tested.</p> <p>JA/SPB: JobAps Senior Certification Engineer showed the delivered Contact Letter Listing for SPB to validate. The report provided is not user friendly. Many of the information listed on every row should have been on the Header, (Dept, Referral/Cert#, Job Class, Job Title, and Location). The data on the row should be Rank, Seq#, LName, FName, EZID, Expiration, Reply-By Date and E-List.</p>
B-88.	The proposed solution must provide functionality for limiting the number of names on LEAP Certification Lists produced to a maximum number to be specified by authorized users.	Certification	Complete	
B-89.	The proposed solution must provide functionality for automatically updating eligible lists based on personnel actions (e.g., hiring, list clearances, separation,) when data is received from SCO.	Eligibility	Complete	
B-90.	The proposed solution must provide functionality for definition of effective and expiration dates for all lists and allow for a list expiration date to be extended up to a maximum or extended indefinitely, in accordance with business rules. (Gov. Code 18901)	Eligibility	Complete	
B-91.	The proposed solution must provide functionality for definition of on/off dates for eligible individuals on any merged list and for continuous exams. (Gov. Code 18939)	Eligibility	Complete	
B-92.	The proposed solution must provide functionality for lists to be merged. (Gov. Code 18939)	Eligibility	Complete	
B-93.	The proposed solution must provide functionality for names on a Certified List to be removed when the person leaves for military service and be reinstated to the same list or a similar list when they return and keep the transaction history of actions taken.	Eligibility	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-94.	The proposed solution must provide functionality for a certification list to be revised, cancelled, and reissued an unlimited number of times by authorized users, based on business rules. (Gov. Code 18901.5)	Certification	Modification	<p>These functions have been delivered.</p> <p>JA/SPB: Cancellation of Certs with activities should not be deleting the cert.</p> <p>JA believes that this is a new request. However, the system edit will be enforced.</p>
B-95.	The proposed solution must provide functionality for the re-creation of a certification list by authorized users, based on classification and date parameters for a period of five (5) years. (Gov. Code 18901.5)	Certification	Incomplete	<p>SPB: JobAps Senior Certification Engineer to validate if an application can be deleted when the candidates is on a list.</p> <p>JA Senior Certification Engineer confirmed that the system allows you to delete application regardless.</p> <p>AFRA: This is incomplete because the programs may be modified and not aligned with the tables that have been backed up.</p>
B-96.	The proposed solution must provide functionality for departments to order their own appropriate lists when the appropriate list belongs to them.	Certification	Complete	
B-97.	The proposed solution must provide functionality for the SPB to order "appropriate list" for other departments. That is, order a certification list that belongs to one department on behalf of another and make the list available to the requesting department.	Certification	Complete	
B-98.	The proposed solution must provide functionality for the removal of an individual's name from one or all lists on which that individual's name appears if the individual is determined to be ineligible for employment. (Gov. Code 19583.1)	Eligibility	Complete	
B-99.	The proposed solution must provide functionality for the testing department(s) or SPB to modify any field contained in the eligible list file and track and retain a history of all changes, who made the change, and date of change. (Gov. Code 18901)	Support	Error Log	<p>SPB: The Audit Trail to provide this function has problems and needs to be resolved.</p> <p>Log# 12508</p>

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-100.	The proposed solution must provide functionality for users with appropriate access security to reestablish any list after the expiration date has passed. (Gov. Code 18901.5)	Eligibility	Complete	
B-101.	The proposed solution must provide functionality for ensuring that individuals included on certification lists are ranked, listed, and certified consistent with the appropriate certification rules and applicable civil service rules and laws. (Gov. Code 19057-19057.4)	Certification	Error Log	SPB: This function has been delivered. However, there are inconsistent results periodically obtained. These problems have been reported to JobAps.  The No-In-Score error Log# 11799 needs to be tested by and approved by SPB.
B-102.	The proposed solution must provide functionality for departments to enter list clearance information in order to close out the cert.	Certification	Complete	
B-103.	The proposed solution must generate aging reports for certification lists that have not been closed out within 90 days.	Reporting	Complete	
B-104.	Prior to removing a newly appointed individual from the Employment List, the proposed solution must provide functionality for verifying that contact outcomes have been entered for eligible individuals as defined on the Certification List provided to the hiring department or require that the contact outcomes be entered. (Gov. Code 19057-19057.4)	Certification	Complete	
B-105.	The proposed solution must provide functionality for maintaining the following types of employment lists and allow for creation of additional types of lists. (Gov. Code 18904 and 19504): <ul style="list-style-type: none"> <li>· State Restriction of Appointment</li> <li>· Re-employment (sub-divisional, Departmental, General)</li> <li>· Promotional (sub-divisional, Departmental, Multi-departmental, service-wide)</li> <li>· Preferred Limited Term</li> <li>· Departmental Open</li> <li>· Multi-departmental open</li> <li>· Regular open</li> <li>· Limited Exam and Appointment Program</li> </ul>	Support	Complete	



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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-106.	The proposed solution must provide functionality for updating the Eligible Lists to reflect the information contained in the Employment History file such as the date the person was hired into a new position, change of address, and/or job transfers (Gov. Code 18901)	Batch	Validation	
B-107.	The proposed solution must provide functionality to automatically change the status of the subject employee to "inactive" on all promotional lists after it has been reported by an employment action from the State Controller's Office (on the T-Log tape) that an employee leaves State service. If the employee re-enters State service within six (6) months with a permanent appointment; provide functionality to reestablish the employee's name on the promotional list and store the history of the transaction. (CCR Title 2, Division 1, Section 240)	Batch	Complete	
B-108.	The proposed solution must provide functionality to automatically change the status of the subject employee to "inactive" on all open and promotional lists after it has been reported by an employment action from SCO that an employee has been terminated from State service; provide functionality to allow the employee to be re-established on the list if the employment action appeal is upheld and reinstatement of list eligibility is stipulated.	Batch	Validation	
B-109.	The proposed solution must provide functionality to automatically remove the subject employee from all applicable list(s) when an individual is appointed to a position from a Certification List.	Batch	Complete	
B-110.	When an individual transfers to a position (instead of being appointed from a certification list), the proposed solution must provide functionality for automatically changing the status of the subject employee to "inactive" on the applicable list and/or prevent application for future examinations for that class. Based on business rules, retain eligibility until completion of probation.	Batch	Complete	
B-111.	The proposed solution must provide functionality for applying proper certification rules in accordance with applicable business rules.	Certification	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-112.	For larger certification lists, the proposed solution must provide functionality for creation of partial certification lists in accordance with applicable business rules (e.g. lists with over 1000 in the top three ranks can specify a specific number of eligibles to be certified in increments of 50 eligibles).	Certification	Complete	
B-113.	The proposed solution must provide functionality for certification list cut-off at ranking or by specific number of eligibles specified by the user (minimum of three ranks).	Certification	Complete	
B-114.	The proposed solution must provide functionality for permitting creation of a preliminary certification list, search by Social Security Number or other unique identifier to ensure job applicant is reachable, and then ability to make list permanent. (Gov. Code 19057 through 19057.4)	Certification	Complete	
B-115.	The proposed solution must provide functionality for retaining history adequate to determine names and rankings of individuals on eligible lists at a point in time (at a minimum monthly intervals).	Eligibility	Incomplete	<p>JobAps Recommendation: "The State will need to save database backups as point-in-time snapshots at whatever frequency they deem appropriate. An archived database can be hooked up to the current JobAps Website and a user can access the system as though they were working at the point in time of the archive. This provides the ability to recreate eligible lists at a point in time."</p> <p>AFRA: This is incomplete because the programs or tables may be modified and not aligned with the tables that have been backed-up.</p> <p>JA: The recommendation will be reviewed and concerns raised will be addressed.</p>
B-116.	The proposed solution must provide functionality for making all eligible lists available via the Web for all Departments to view.	Security	Error Log	<p>SPB: This function has been delivered. However, the Spot Exams that were converted from Legacy system need to be corrected so that the users can view eligible list by correct locations.</p> <p>This problem was reported under Issue # 9765 and 10458. The logs have been closed.</p>

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-117.	The proposed solution must provide functionality for producing informal and formal certification lists by various sort criteria based on individual department queries.	Certification	Complete	
B-118.	The proposed solution must provide functionality for capturing employment contact and hiring results.	Certification	Complete	
B-119.	The proposed solution must provide functionality for updating eligible records to reflect changes in the Employment History file and to reflect other personnel actions.	Eligibility	Error Log	SPB: Function has been delivered and tested. The expected result on the Aps Summary is not reflected on the page. A problem ticket is being created for this problem. Related to Requirement B-89, 107, 109. See Log# 12636
B-120.	The proposed solution must provide functionality for capturing and tracking applicant and test information on individuals not currently in State service (e.g. public, out of country individuals). (Gov. Code 18900)	Application	Complete	
B-121.	The proposed solution must provide functionality for authorized personnel to generate reports related to ethnicity, gender and disability data by exam or classification.	Reporting	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-122.	The proposed solution must provide functionality for generating reports and notices required to ensure that the system is processing candidates appropriately based on civil service rules.	Reporting	Partial	<p>SPB: Additionally, the system needs to provide configurable business rules to indicate the type scores that are permissible for managerial exams and warn the users when they do not use appropriate scoring for exams.</p> <p>A report showing the departments that have conducted managerial exam and did not use appropriate scoring rule(s) must be provided.</p> <p>The system should provide report of all lists where departments have included a specific candidate from other departments and SPB list onto their list.</p> <p>JobAps reports to satisfy the requirements of RFP Section 4.0 listed below need to be identified.</p> <ol style="list-style-type: none"> <li>1) Audit the examination process</li> <li>2) Audit the outcome of each exam processing phase</li> <li>3) Audit the appointment processes overall</li> <li>4) Generate statistics for various inquiries and reports</li> <li>5) Comply with federal and state reporting requirements, including federal EEO</li> <li>6) Notify applicants of scheduled examination times and sites</li> <li>7) Facilitate administration of the examination</li> <li>8) Audit the outcome of a specific hiring process</li> <li>9) Generate general communication with applicants</li> <li>10) Assess the current status of a list to determine if additional examinations are needed</li> <li>11) Evaluate the outcome of appointment practices</li> </ol>
B-123.	The proposed solution must provide functionality for authorized users to perform audits of the system data for up to a specified length of time or until the Certification List is cancelled or closed and produce a report of the number of hires and the number of positions for which the Certification List was ordered.	Reporting	Complete	
B-124.	The proposed solution must provide functionality for producing general notices as required, including but not limited to extension of lists, status updates, change of information, and/or abolishment of lists.	Reporting	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
B-125.	The proposed solution must provide functionality for creation of reports of Certification Lists by job duties, minimum qualifications and same salary or higher with the same job skills ("Appropriate Lists").	Reporting	Not Workable	The structure of California Job Classification as currently identified by the State inhibits completion of this requirement.
B-126.	The proposed solution must provide functionality for eligible list disclosure per SPB Rule 50, Selection Merit Manual Section 8000.	Support	Error Log	SPB: The information provided is sometimes incomplete or inaccurate. The system does not address spot list. See Open Issues List # 3. This issue was moved to the Resolved issues List.
B-127.	The proposed solution must provide functionality for creating and producing a duplicate certification list "snapshot" (read-only file) for every certification list produced (for replacement or for audit) for the life of the list plus one year (5 years).	Certification	Partial	There is no read-only or snap shot list provided.
B-128.	The proposed solution must provide functionality for maintaining history of selected online transactions and provide the capability to authorized SPB staff to view the history (requirement does not apply to applicants)	Batch	Error Log	SPB: The solution provided is incomplete and inaccurate. See log# 7197, 10718 (closed), 11883 (duplicate log - Closed), 12190 (closed), 12400 (Hot Fix to be tested), 10666 (closed)
B-129.	The proposed solution must provide functionality to maintain selection business rules for creation of Certification Lists through tables that can be updated by authorized individuals while retaining previous data for history and audit purposes.	Certification	Complete	
B-130.	The proposed solution must provide functional search capability of user-defined tables.	General	Partial	SPB: This function is possible but the data is not fully displayed.
B-131.	The proposed solution must provide functionality to permit authorized staff to directly receive and transfer information among remote offices and off-site locations using current technologies (e.g., e-mail with attached files).	Support	Complete	
T-1	The proposed solution must allow centralized tracking of departmental user access when revoked for cause.	Technical	Complete	
T-2	The proposed solution must provide tools to monitor the proposed solution system performance.	Technical	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
T-3	The proposed solution must conform to the State Information Security Guidelines, provide functionality for limiting access to applicant, examination, and other confidential data, must provide access security to ensure that personal information about applicants is not inappropriately disclosed, including ensuring that -- after initial data entry -- data is not displayed when the applicant record is accessed or modified, either during self-service or departmental processing (Civil Code 1798 and Gov. Code 19705), and allow for data encryption for stored and in transit confidential data.	Technical	Complete	
T-4	The proposed solution must provide an open architecture acceptable to DTS, not proprietary.	Technical	Complete	
T-5	The proposed solution must provide external user interfaces that conform to applicable Americans with Disabilities Act (ADA) Level 1 regulations regarding access for individuals with disabilities as noted in 28 CFR Sec. 36.303 and 28 CFR Sec. 35.160. The proposed solution must meet lowest level of government endorsed disability compliance level.	Technical	Partial	SPB-IT: OEC is OK. Admin user is not ADA compliant. Also related B-9: Independent testing of these tests has not been performed by SPB.
T-6	The proposed solution must provide an intuitive graphical user interface (GUI) using screen navigation via pointing device or keyboard at user option.	Technical	Complete	
T-7	The proposed solution must provide a GUI development toolset to maintain the proposed solution's user interfaces.	Technical	Partial	SPB-IT: A text editor is provided to maintain select pages. The majority of the application pages are not accessible.  JA: JobAps uses DreamWeaver, .Net, etc. JobAps CEO would like to speak with the Engineering staff to see if this is really necessary since SPB staffs are not modifying the application pages.
T-8	The proposed solution must provide functionality to import data from external sources (such as employment and salary data from SCO, scanned data, etc.).	Technical	Validation	
T-9	The proposed solution must provide functionality to allow users to print screen information including application name and screen or function name for troubleshooting end-user support.	Technical	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
T-10	The proposed solution must provide functionality for data entry errors to be identified at the time of entry with descriptive and instructional messages in non-technical terms.	Technical	Error Log	SPB-IT: Field Edits should be on tab not on Save. Log#s 1144 (closed), Log# 5992 (closed), and Log# 12359 to be provided by Steve Brown
T-11	The proposed solution must provide access to all components of the ECRP application through a single entry sign-on to the system for SPB and departmental HR staff.	Technical	Complete	
T-12	The proposed solution must provide consistent menus and screens with a common look and feel throughout the application with a screen title and unique screen identifier on every screen.	Technical	Partial	SPB-IT: JobAps needs to display information consistently. List of inconsistencies has been provided to JobAps.
T-13	The proposed solution must provide a standard real-time processing indicator (i.e. the hourglass found in MS Word) that will enable the user to visually assess that the application is processing and not frozen.	Technical	Complete	
T-14	The proposed solution shall provide comprehensive electronic context-sensitive help function that can be accessed both from the function in question or independently from a menu. The other functions to assist the user shall include: <ul style="list-style-type: none"> <li>· provide a Help table of contents, multiple (up to 99) index levels, and full text search;</li> <li>· provide cross reference and online access to regulations, policy and procedures by issue;</li> <li>· provide online access to the User's Manual; and,</li> <li>· have correct spelling and grammar in United States English, and shall be consistent in font, color, format, text case, and style.</li> </ul>	Technical	Error Log	SPB: Many of the tabs do not contain the updated information about the tab/page. The Certify tab and all pages related to it do not have help function.  See Error Log# 12543 created by JobAps.
T-15	The proposed solution must provide functionality to enter and modify online documentation with no programming changes to the application for the solution as delivered and accepted by SPB and record who made the change and when.	Technical	Incomplete	SPB-IT: There are 2 Text Editors to perform different functions (1 for Bulletin Boards and the other for Job Bulletin). JobAps Text Editor does not handle formatting well.  SPB: Audit Trail is not available. Therefore, this requirement is incomplete.

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
T-16	The proposed solution must provide functionality to encapsulate business rules for consistent application of SPB civil service laws and regulations and allow business rule changes with minimal programming changes and record date the change was made and who made the change.	Technical	Incomplete	<p>SPB-IT: Audit function provided by the system needs to be fixed. See Reported errors - Log# 7197.</p> <p>The following Business Rules are Hard-Coded:                      -14 Days to Post Bulletin                      -Creation Select-Flags uses "SFS or "SFP".                      -Retention of Proficiency scores for typing (was a change to the design document)</p> <p>JA: SPB to provide a list of know business rules that are not audited.</p>
T-17	The proposed solution must provide tools that manage solution module versions, relationships and migration/environment statuses.	Technical	Partial	JA: JobAps has the tool for version control, the codes provided to SPB IT does not have version# in it.
T-18	The proposed solution must have functionality to allow support staff to determine if a batch process has run to the end of the job and must allow for batch processes to be restarted from the point of failure and allow for the remote execution and monitoring of batch processes.	Technical	Partial	SPB-IT: Jobs can be monitored and executed. However, there is no restart capability at failure point. Processes have Start and End times. Daily batch jobs from web server lack notifications. See Log# 10816
T-19	The proposed solution must permit online transactions while batch processing is occurring.	Technical	Validation	
T-20	The proposed solution must have functionality to automatically notify support staff that specified events have occurred, such as program exceptions, connectivity failures, etc. and have functionality to log and/or self diagnose system errors.	Technical	Incomplete	<p>SPB-IT: There is no automatic notification. The log file is provided. There are approximately 200 exception errors daily. These errors need to be handled.</p> <p>JA: JobAps to provide information on setup similar to its environment.</p>
T-21	The proposed solution must allow for enhancements to be made without requiring a recompile of the entire system.	Technical	Complete	
T-22	The proposed solution must provide a toolset to manage all application and database components of the proposed solution. (Bidder must leverage existing tools available through DTS whenever possible.)	Technical	Complete	



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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
T-23	The proposed solution must provide functionality to send broadcast messages at sign-on and as required throughout the day to a definable set of users and require acknowledgement that the message has been read.	Technical	Partial	SPB-IT: There is alert of any broadcasted message. Also, the acknowledgement is missing.
T-24	The proposed solution must have functionality to log a user off if there has been no activity for a specified period of time.	Technical	Not Delivered	JA: This option has been developed and will be available for general release in May/June 2010.
T-25	Deleted	Technical		This requirement was deleted as part of RFP Addenda
T-26	The proposed solution must separate the data, rules for managing the data, and the methods of accessing the data from the application.	Technical	Not Delivered	JA: Some of the older pages are classic ASP to (ADO . DB Object)
T-27	Ninety five percent (95%) of department end-user online display screen and record update response times shall not exceed three (3) seconds and none shall exceed ten (10) seconds under normal network operating conditions. (NOTE: this level of response time does not apply to applicants since their system components vary widely.)	Technical	Incomplete	SPB-IT: New Server was installed on 03/31/2010. Need to monitor for a period of about 2 – 3 weeks to evaluate performance.  Majority of the screens takes between 3 -10 seconds to respond. Some pages take more than 10 seconds to load.
T-28	The proposed solution must provide functionality to perform data sharing with Microsoft Office (MS) tools, including functionality to extract data to MS Excel or other MS Office applications.	Technical	Complete	
T-29	The proposed solution must provide or support protection mechanisms to ensure that privacy controls are deployed and maintained for identity and authentication data so that the data will always be kept private and secure from disclosure, access, or destruction by unauthorized system entities.	Technical	Complete	
T-30	The proposed solution must provide or support the establishment and maintenance of controls that define relationships, hierarchical structures, and privileges or grant access rights for system entities in accordance with their relationship to the organization.	Technical	Complete	
T-31	The proposed solution must provide or support regularly scheduled and/or critical upgrades, and software patches.	Technical	Complete	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
T-32	The proposed solution must provide or support encryption mechanisms that ensure the constant protection of information assets while in transit or storage.	Technical	Complete	
T-33	During system failure the levels of security must be maintained during the backup and recovery of critical information assets, processes, data, resources, and any system to enable the recovery of assets back to a secured operational status for SPB.	Technical	Validation	
T-34	The proposed solution must implement mechanisms to protect security data from unauthorized access, modification and/or deletion including secure storage of audit logs, system usage information, and the appropriate items required for forensic investigations.	Technical	Partial	SPB-IT: Audit function needs to be enhanced for forensic investigations. This is because the audit function is not available. See Log# 7197 on requirement T-16.
T-35	The proposed solution must provide a security function to include security services, which ensure consistent and continued security of all devices, systems, network software, and operating systems used by, and interfacing with, the proposed solution and ensure consistent and continued security of the telecommunications components interfacing with the proposed solution.	Technical	Complete	
T-36	The proposed solution must provide or support self-recovery mechanisms or functionality in the event of failure that protects processes, data, resources, and systems such that all systems recover to a secured operational state.	Technical	Complete	
T-37	The proposed solution must provide a plan that details activities for emergency response, backup operations, and disaster recovery to ensure availability of critical system resources and facilitate the continuity of business operations.	Technical	Not Delivered	JA/AFRA: Guidance / input is to be provided by JobAps
T-38	The proposed solution must be flexible in terms of functionality to add capacity with minimal or no system downtime and reduce the impact to both users and SPB. Resource capacities include CPU, Memory, Disk storage, and I/O throughput.	Technical	Complete	
T-39	The proposed solution must provide capacity for 800 internal concurrent departmental business users and 30,000 visitors per day to the SPB website seeking employment information,	Technical	Validation	

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Req #	Functional & Technical Requirements	Category	Validated Status	Comments
T-40	The proposed solution must provide for a growth capacity of the database at least 30 percent (30%) per year over a 5-year period without degrading performance and response time.	Technical	Validation	
T-41	The proposed solution must be available 24 hours a day, 7 days a week with the exception of agreed upon maintenance windows and must be operational 99.5 percent (99.5%) of the time during scheduled uptime hours measured over a period of one (1) month.	Technical	Complete	
T-42	All network communications shall be based on the TCP/IP protocol.	Technical	Complete	

## **APPENDIX D – REFERENCES**

Jed Simms (26 June, 2007 09:19) *Why Projects Fail: Part Two, Poor Business Requirements*, CIO Magazine.

Karl Wiegers (January/February 2000) *10 Requirements Traps to Avoid*, Software Testing & Quality Engineering Magazine